REMARKS

In the Office Action mailed July 2, 2007 (hereinafter, "Office Action"), claims 1-16 and 18-39 stand rejected under 35 U.S.C. § 103. Claims 1, 6, 11, 19, 21, 23, 29, 32, 34, 37 and 39 have been amended.

Applicants respectfully respond to the Office Action.

I. Rejection of Claims 1, 2, 3, 14, 21, 22, 33 and 39 under 35 U.S.C. § 103

Claims 1, 2, 3, 14, 21, 22, 33 and 39 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,944,449 to Gandhi et al. (hereinafter, "Gandhi") in view of U.S. Patent Publication No. 2004/0165529 to Lee (hereinafter, "Lee"), U.S. Patent Publication No. 2002/0173316 to Jang et al. (hereinafter, "Jang"), U.S. Patent No. 6,240,287 to Cheng et al. (hereinafter, "Cheng") and U.S. Patent No. 5,884,174 to Nagarajan et al. (hereinafter, "Nagarajan"). Applicants respectfully traverse.

The factual inquiries that are relevant in the determination of obviousness are determining the scope and contents of the prior art, ascertaining the differences between the prior art and the claims in issue, resolving the level of ordinary skill in the art, and evaluating evidence of secondary consideration. KSR Int'l Co. v. Teleflex Inc., 550 U.S. ___, 2007 U.S. LEXIS 4745, at **4-5 (2007) (citing Graham v. John Deere Co. of Kansas City, 383 U.S. 1, 17-18 (1966)). To establish a *prima facie* case of obviousness, the prior art references "must teach or suggest all the claim limitations." M.P.E.P. § 2142. Moreover, the analysis in support of an obviousness rejection "should be made explicit." KSR, 2007 U.S. LEXIS 4745, at **37. "[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." Id. (citing In re Kahn, 441 F.3d 977, 988 (Fed. Cir. 2006)).

Applicants respectfully submit that the claims at issue are patentably distinct from the cited references. The cited references do not teach or suggest all of the subject matter in these claims.

Claim 1 has been amended to recite:

> means for detecting an early time period, wherein the early time period occurs before the overload is detected . . . wherein the plurality of control mechanisms are also implemented during the early time period.

Support for this amendment may be found in Applicants' specification, for example, pages 13-14, paragraph [0047] and page 16, paragraph [0054]. Gandhi, alone or in combination with Lee, Jang, Cheng and Nagarajan, does not teach or suggest this subject matter. The Office Action admits that "Gandhi does not particularly disclose . . . means for implementing a plurality of control mechanisms." (Office Action, page 3.) The addition of Lee, Jang, Cheng and Nagarajan does not overcome this deficiency.

Instead Lee states:

> An overload control method of a high speed data communication system can include judging whether an access network is overloaded, determining a class of the overload and restricting an originating call and a termination call according to the determined class during the overload. Since the access terminal, which can be the lowermost terminal of the system, controls the data call origination, resources at the side of the access network can be effectively managed. In addition, the overload control can be discriminately performed according to a degree of the overload so that the overload control method can effectively cope with the overload situation.

Lee, Abstract.

Determining a class of the overload does not teach or suggest "detecting an early time period, wherein the early time period occurs before the overload is detected" because if a class of overload is determined, the overload condition has already been detected. For example, Lee states "according to the determined class during the overload." (Id.) Similarly, performing the overload control "according to a degree of the overload" does not teach or suggest "wherein the plurality of control mechanisms are also implemented during the early time period." If overload control mechanisms are performed "according to a degree of the overload", the overload condition has likewise already been detected. In contrast, claim 1 recites that "wherein the plurality of control mechanisms are also implemented during the early time period."

Lee also states:

> Another object of the present invention is to provide an overload control method of a data communication system that discriminately restricts an originating call and a termination call according to class of overload.

> Another object of the present invention is to provide an overload control method of a data communication system that restricts at least an originating call according to an overload status.
>
> Another object of the present invention is to provide an overload control method of a data communication system that restricts at least an originating call according to an overload status at an access terminal level.
>
> To achieve at least the above objects in whole or in part, there is provided a method that includes judging whether an access network is overloaded and determining a class of the overload for restricting an originating call and a termination call according to the determined class.

Lee, paragraphs [0033] to [0036].

Providing an overload control method "according to class of overload . . . an overload status . . . an overload status as an access terminal level" does not teach or suggest "detecting an early time period, wherein the early time period occurs before the overload is detected . . . and wherein the plurality of control mechanisms are also implemented during the early time period" because the overload has already occurred (i.e., overload has a class, status, degree, etc.) Simply judging whether an access network is overloaded does not teach or suggest "detecting an early time period, wherein the early time period occurs before the overload is detected . . . and wherein the plurality of control mechanisms are also implemented during the early time period."

Lee further states:

> Preferred embodiments according to the present invention can be implemented such that an overload control process periodically checks whether the access network is overloaded.

Lee, paragraph [0052].

Checking whether the access network is overloaded does not teach or suggest "detecting an early time period, wherein the early time period occurs before the overload is detected . . . and wherein the plurality of control mechanisms are also implemented during the early time period." Instead, Lee states that overload control mechanisms are only implemented when overload has been detected. For example, Lee states "when the access network is overloaded, a call is discriminately restricted according to a degree of overload." (Id. paragraph [0052].) Lee does not teach that "the plurality of control mechanisms are also implemented during the early time period."

The addition of Jang does not overcome the deficiencies of Gandhi and Lee. Instead, Jang states:

> [W]hen a large number of users gather in relatively close proximity, the demand for mobile phone services may exceed the capacity of the mobile network. A similar situation exists during emergency situations when a large number of users attempt to place calls within a relatively short time. Once the BSC is made aware of the overload condition, the BSC begins to analyze the condition to determine the proper course of action . . . the BSC determines if access to the network should be limited . . . if control access is implemented, the BSC then decides on which "call type" or type of service to control.

Jang, paragraph [0024].

Deciding on which "call type" or type of service to control does not teach or suggest "detecting an early time period, wherein the early time period occurs before the overload is detected . . . and wherein the plurality of control mechanisms are also implemented during the early time period." In fact, the Office Action merely points to this portion of Jang to support the assertion that Jang teaches "it then decides which type of application/call (i.e., voice, data, facsimile, etc.) to control." (Office Action, page 5.)

The addition of Cheng does not overcome the deficiencies of Gandhi and Lee. Instead, Cheng states:

> Core processing load at a cellular base station is controlled by first reducing unnecessary user handoff activities in the base station's cell, and then further reducing BHCA traffic if processing overload conditions persist . . . With respect to the mentioned second phase, a known "persistence test" algorithm, typically imbedded in CDMA mobile user stations, can be used to reduce or to redistribute access requests, thus reducing the arrival rate at a cell during a processing overload condition. Because the persistence test is applied normally to access requests, its use can only help to reduce user call originations and user registrations.

Cheng, col. 3, line 52 – col. 4, line 20.

Controlling core processing load at a cellular base station by reducing BHCA traffic if processing overload conditions persist does not teach or suggest "detecting an early time period, wherein the early time period occurs before the overload is detected . . . and wherein the plurality of control mechanisms are also implemented during the early time period." In fact, Cheng teaches the opposite in "reducing the arrival rate at a cell during a processing overload condition." (Id. emphasis added.)

The addition of Nagarajan does not overcome the deficiencies of Gandhi and Lee. Instead, Nagarajan states:

> In an operational wireless network, in order to ensure that the QOS requirements are being met on an ongoing basis, it may be necessary to dynamically vary the parameters of an admission control policy as, for example, the traffic load varies. Pursuant to the integral guard channel policy, it may be necessary to dynamically change the number of guard channels with the traffic load.

Nagarajan, col. 4, lines 46-53.

Ensuring that the QoS requirements are met by varying the parameters of an admission control policy does not teach or suggest "detecting an early time period, wherein the early time period occurs before the overload is detected . . . and wherein the plurality of control mechanisms are also implemented during the early time period." Instead, Nagarajan states that these parameters are varied "as . . . the traffic load varies." (Id.) As such, Nagarajan teaches meeting the QoS requirements during a traffic load period. There is no teaching or suggestion by Nagarajan of "detecting an early time period, wherein the early time period occurs before the overload is detected . . . and wherein the plurality of control mechanisms are also implemented during the early time period."

In view of the foregoing, Applicants respectfully submit that claim 1 is patentably distinct from the cited references. Accordingly, Applicants respectfully request that the rejection of claim 1 be withdrawn.

Claims 2, 3 and 14 depend either directly or indirectly from claim 1. Accordingly, Applicants respectfully request that the rejection of claims 2, 3 and 14 be withdrawn.

Claims 21 and 39 have been amended to include subject matter that is similar to the subject matter amended to claim 1. As such, Applicants submit that claims 21 and 39 are patentably distinct from the cited references for at least the same reasons as those presented above in connection with claim 1. Accordingly, Applicants respectfully request that the rejection of claims 21 and 39 be withdrawn.

Claims 22 and 33 depend directly from claim 21. Accordingly, Applicants respectfully request that the rejection of claims 22 and 33 be withdrawn.

II. Rejection of Claim 10 under 35 U.S.C. § 103

Claim 10 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Gandhi in view of Lee, Jang, Cheng and Nagarajan, in further view of U.S. Patent No. 6,442,398 to Padovani et al. (hereinafter, "Padovani"). Applicants respectfully traverse. The standard to establish a *prima facie* case of obviousness is provided above.

Claim 10 depends directly from claim 1. Accordingly, Applicants respectfully request that the rejection of claim 10 be withdrawn.

III. Rejection of Claims 4, 5, 24 and 25 under 35 U.S.C. § 103

Claims 4, 5, 24 and 25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gandhi in view of Lee, Jang, Cheng and Nagarajan, in further view of U.S. Patent Application Publication No. 2003/0125068 to Lee et al. (hereinafter, "Lee '068"). Applicants respectfully traverse. The standard to establish a *prima facie* case of obviousness is provided above.

Claims 4 and 5 depend indirectly from claim 1. Accordingly, Applicants respectfully request that the rejection of claim 4 and 5 be withdrawn.

Claims 24 and 25 depend indirectly from claim 21. Accordingly, Applicants respectfully request that the rejection of claim 24 and 25 be withdrawn.

IV. Rejection of Claims 7-9 and 26-28 under 35 U.S.C. § 103

Claims 7-9 and 26-28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gandhi in view of Lee, Jang, Cheng and Nagarajan, in further view of U.S. Patent Publication No. 2003/0003921 to Laakso et al. (hereinafter, "Laakso"). Applicants respectfully traverse. The standard to establish a *prima facie* case of obviousness is provided above.

Claims 7-9 depend either directly or indirectly from claim 1. Accordingly, Applicants respectfully request that the rejection of claims 7-9 be withdrawn.

Claims 26-28 depend either directly or indirectly from claim 21. Accordingly, Applicants respectfully request that the rejection of claim 26-28 be withdrawn.

V. Rejection of Claims 12 and 30 under 35 U.S.C. § 103

Claims 12 and 30 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gandhi in view of Lee, Jang, Cheng and Nagarajan, and in further view of U.S. Patent No. 6,707,792 to Volftsun et al. (hereinafter, "Volftsun"). Applicants respectfully traverse. The standard to establish a *prima facie* case of obviousness is provided above.

Claim 12 depends directly from claim 1. Accordingly, Applicants respectfully request that the rejection of claim 12 be withdrawn.

Claims 30 depends directly from claim 21. Accordingly, Applicants respectfully request that the rejection of claim 30 be withdrawn.

VI. Rejection of Claims 13 and 31 under 35 U.S.C. § 103

Claims 13 and 31 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gandhi in view of Lee, Jang, Cheng and Nagarajan, and in further view of U.S. Patent No. 6,785,546 to Djuric (hereinafter, "Djuric"). Applicants respectfully traverse. The standard to establish a *prima facie* case of obviousness is provided above.

Claim 13 depends directly from claim 1. Accordingly, Applicants respectfully request that the rejection of claim 13 be withdrawn.

Claims 31 depends directly from claim 21. Accordingly, Applicants respectfully request that the rejection of claim 31 be withdrawn.

VII. Rejection of Claims 15 and 35 under 35 U.S.C. § 103

Claims 15 and 35 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gandhi in view of Lee, Jang, Cheng and Nagarajan, and in further views of Laakso and Djuric. Applicants respectfully traverse. The standard to establish a *prima facie* case of obviousness is provided above.

Claim 15 depends directly from claim 1. Accordingly, Applicants respectfully request that the rejection of claim 15 be withdrawn.

Claims 35 depends directly from claim 21. Accordingly, Applicants respectfully request that the rejection of claim 35 be withdrawn.

VIII. Rejection of Claims 16 and 36 under 35 U.S.C. § 103

Claims 16 and 36 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gandhi in view of Lee, Jang, Cheng, Nagarajan, Laakso and Djuric, and further in view of Padovani. Applicants respectfully traverse. The standard to establish a *prima facie* case of obviousness is provided above.

Claim 16 depends directly from claim 1. Accordingly, Applicants respectfully request that the rejection of claim 16 be withdrawn.

Claims 36 depends directly from claim 21. Accordingly, Applicants respectfully request that the rejection of claim 36 be withdrawn.

IX. Rejection of Claim 18 under 35 U.S.C. § 103

Claim 18 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Gandhi in view of Lee, Jang, Cheng and Nagarajan, and further in view of U.S. Patent Publication No. 2002/0155852 to Bender et al. (hereinafter, "Bender"). Applicants respectfully traverse. The standard to establish a *prima facie* case of obviousness is provided above.

Claim 18 depends directly from claim 1. Accordingly, Applicants respectfully request that the rejection of claim 18 be withdrawn.

X. Rejection of Claims 6 and 23 under 35 U.S.C. § 103

Claims 6 and 23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gandhi in view of Lee, Jang, Cheng, Nagarajan and U.S. Patent No. 6,134,216 to Gehi et al. (hereinafter, "Gehi"). Applicants respectfully traverse. The standard to establish a *prima facie* case of obviousness is provided above.

Claim 6 has been amended to recite:

> means for detecting an early time period, wherein the early time period occurs before the overload is detected . . . and wherein the plurality of control mechanisms are also implemented during the early time period.

Support for this amendment may be found in Applicants' specification, for example, pages 13-14, paragraph [0047] and page 16, paragraph [0054]. Gandhi, alone or in combination with Lee, Gehi, Jang, Cheng and Nagarajan, does not teach or suggest this subject matter. The Office Action admits that "Gandhi does not particularly disclose . . . means for implementing a

plurality of control mechanisms." (Office Action, page 32.) The addition of Lee, Gehi, Jang, Cheng and Nagarajan does not overcome this deficiency.

Instead Lee states:

> An overload control method of a high speed data communication system can include judging whether an access network is overloaded, determining a class of the overload and restricting an originating call and a termination call according to the determined class during the overload. Since the access terminal, which can be the lowermost terminal of the system, controls the data call origination, resources at the side of the access network can be effectively managed. In addition, the overload control can be discriminately performed according to a degree of the overload so that the overload control method can effectively cope with the overload situation.

Lee, Abstract.

Determining a class of the overload does not teach or suggest "detecting an early time period, wherein the early time period occurs before the overload is detected" because if a class of overload is determined, the overload condition has already been detected. For example, Lee states "according to the determined class during the overload." (Id.) Similarly, performing the overload control "according to a degree of the overload" does not teach or suggest "wherein the plurality of control mechanisms are also implemented during the early time period." If overload control mechanisms are performed "according to a degree of the overload", the overload condition has likewise already been detected. In contrast, claim 6 recites that "wherein the plurality of control mechanisms are also implemented during the early time period."

Lee also states:

> Another object of the present invention is to provide an overload control method of a data communication system that discriminately restricts an originating call and a termination call according to class of overload.
>
> Another object of the present invention is to provide an overload control method of a data communication system that restricts at least an originating call according to an overload status.
>
> Another object of the present invention is to provide an overload control method of a data communication system that restricts at least an originating call according to an overload status at an access terminal level.
>
> To achieve at least the above objects in whole or in part, there is provided a method that includes judging whether an access network is

> overloaded and determining a class of the overload for restricting an originating call and a termination call according to the determined class.

Lee, paragraphs [0033] to [0036].

Providing an overload control method "according to class of overload . . . an overload status . . . an overload status as an access terminal level" does not teach or suggest "detecting an early time period, wherein the early time period occurs before the overload is detected . . . and wherein the plurality of control mechanisms are also implemented during the early time period" because the overload has already occurred (i.e., overload has a class, status, degree, etc.) Simply judging whether an access network is overloaded does not teach or suggest "detecting an early time period, wherein the early time period occurs before the overload is detected . . . and wherein the plurality of control mechanisms are also implemented during the early time period."

Lee further states:

> Preferred embodiments according to the present invention can be implemented such that an overload control process periodically checks whether the access network is overloaded.

Lee, paragraph [0052].

Checking whether the access network is overloaded does not teach or suggest "detecting an early time period, wherein the early time period occurs before the overload is detected . . . and wherein the plurality of control mechanisms are also implemented during the early time period." Instead, Lee states that overload control mechanisms are only implemented when overload has been detected. For example, Lee states "when the access network is overloaded, a call is discriminately restricted according to a degree of overload." (Id. paragraph [0052].) Lee does not teach that "the plurality of control mechanisms are also implemented during the early time period."

The addition of Gehi does not overcome the deficiencies of Gandhi and Lee. The Office Action merely points to Gehi to support the assertion that Gehi teaches "detecting a second degree overload as a result of the parameter exceeding the threshold for a second period of time longer than the first period of time." (Office Action, page 33.) However, the Office Action does not point to, and Applicants cannot find any teaching or suggestion by Gehi of "detecting an early time period, wherein the early time period occurs before the overload is detected . . . and wherein the plurality of control mechanisms are also implemented during the early time period."

Similarly, the addition of Jang, Cheng and Nagarajan does not overcome the deficiencies of Gandhi and Lee. The Office Action merely points to Jang, Cheng and Nagarajan to support the assertion that these references teach selecting the control mechanism based on "the type of application running in the base station, the persistence of the load on the base station and one or more quality of service (QoS) rules." (Office Action, page 34.) However, the Office Action does not point to, and Applicants cannot find any teaching or suggestion by Jang, Cheng and Nagarajan of "detecting an early time period . . . wherein the early time period occurs before the overload is detected . . . and wherein the plurality of control mechanisms are also implemented during the early time period."

In view of the foregoing, Applicants respectfully submit that claim 6 is patentably distinct from the cited references. Accordingly, Applicants respectfully request that the rejection of claim 6 be withdrawn.

Claim 23 has been amended to include subject matter that is similar to the subject matter amended to claim 6. As such, Applicants submit that claim 23 is patentably distinct from the cited references for at least the same reasons as those presented above in connection with claim 6. Accordingly, Applicants respectfully request that the rejection of claim 23 be withdrawn.

XI. Rejection of Claim 19 under 35 U.S.C. § 103

Claim 19 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Gandhi in view of Lee, Bender, Jang, Cheng, Nagarajan and U.S. Patent No. 6,456,850 to Kim et al. (hereinafter, "Kim"). Applicants respectfully traverse. The standard to establish a *prima facie* case of obviousness is provided above.

Claim 19 has been amended to recite:

> means for detecting an early time period, wherein the early time period occurs before the overload is detected . . . and wherein the plurality of control mechanisms are also implemented during the early time period.

Support for this amendment may be found in Applicants' specification, for example, pages 13-14, paragraph [0047] and page 16, paragraph [0054]. Gandhi, alone or in combination with Lee, Bender, Kim, Jang, Cheng and Nagarajan, does not teach or suggest this subject matter. The Office Action admits that "Gandhi does not particularly disclose . . . means for

implementing a plurality of control mechanisms." (Office Action, page 41.) The addition of Lee, Bender, Kim, Jang, Cheng and Nagarajan does not overcome this deficiency.

Instead Lee states:

> An overload control method of a high speed data communication system can include judging whether an access network is overloaded, determining a class of the overload and restricting an originating call and a termination call according to the determined class during the overload. Since the access terminal, which can be the lowermost terminal of the system, controls the data call origination, resources at the side of the access network can be effectively managed. In addition, the overload control can be discriminately performed according to a degree of the overload so that the overload control method can effectively cope with the overload situation.

Lee, Abstract.

Determining a class of the overload does not teach or suggest "detecting an early time period, wherein the early time period occurs before the overload is detected" because if a class of overload is determined, the overload condition has already been detected. For example, Lee states "according to the determined class during the overload." (Id.) Similarly, performing the overload control "according to a degree of the overload" does not teach or suggest "wherein the plurality of control mechanisms are also implemented during the early time period." If overload control mechanisms are performed "according to a degree of the overload", the overload condition has likewise already been detected. In contrast, claim 19 recites that "the plurality of control mechanisms are also implemented during the early time period."

Lee also states:

> Another object of the present invention is to provide an overload control method of a data communication system that discriminately restricts an originating call and a termination call according to class of overload.
>
> Another object of the present invention is to provide an overload control method of a data communication system that restricts at least an originating call according to an overload status.
>
> Another object of the present invention is to provide an overload control method of a data communication system that restricts at least an originating call according to an overload status at an access terminal level.
>
> To achieve at least the above objects in whole or in part, there is provided a method that includes judging whether an access network is

> overloaded and determining a class of the overload for restricting an originating call and a termination call according to the determined class.

Lee, paragraphs [0033] to [0036].

Providing an overload control method "according to class of overload . . . an overload status . . . an overload status as an access terminal level" does not teach or suggest "detecting an early time period, wherein the early time period occurs before the overload is detected . . . and wherein the plurality of control mechanisms are also implemented during the early time period" because the overload has already occurred (i.e., overload has a class, status, degree, etc.) Simply judging whether an access network is overloaded does not teach or suggest "detecting an early time period, wherein the early time period occurs before the overload is detected . . . and wherein the plurality of control mechanisms are also implemented during the early time period."

Lee further states:

> Preferred embodiments according to the present invention can be implemented such that an overload control process periodically checks whether the access network is overloaded.

Lee, paragraph [0052].

Checking whether the access network is overloaded does not teach or suggest "detecting an early time period, wherein the early time period occurs before the overload is detected . . . and wherein the plurality of control mechanisms are also implemented during the early time period." Instead, Lee states that overload control mechanisms are only implemented when overload has been detected. For example, Lee states "when the access network is overloaded, a call is discriminately restricted according to a degree of overload." (Id. paragraph [0052].) Lee does not teach that "the plurality of control mechanisms are also implemented during the early time period."

The addition of Bender and Kim does not overcome the deficiencies of Gandhi and Lee. The Office Action merely points to Bender and Kim to support the assertion that Bender and Kim teach "the first control mechanism comprises: means for determining idle users, means for bumpting service to idle users; means for determining high data users; and means for bumping service to high data users." (Office Action, page 42.) However, the Office Action does not point to, and Applicants cannot find any teaching or suggestion by Bender and Kim of "detecting an

early time period, wherein the early time period occurs before the overload is detected . . . and wherein the plurality of control mechanisms are also implemented during the early time period."

Similarly, the addition of Jang, Cheng and Nagarajan does not overcome the deficiencies of Gandhi and Lee. The Office Action merely points to Jang, Cheng and Nagarajan to support the assertion that these references teach selecting the control mechanism based on "the type of application running in the base station, the persistence of the load on the base station and one or more quality of service (QoS) rules." (Office Action, page 43.) However, the Office Action does not point to, and Applicants cannot find any teaching or suggestion by Jang, Cheng and Nagarajan of "detecting an early time period . . . wherein the early time period occurs before the overload is detected . . . and wherein the plurality of control mechanisms are also implemented during the early time period."

In view of the foregoing, Applicants respectfully submit that claim 19 is patentably distinct from the cited references. Accordingly, Applicants respectfully request that the rejection of claim 19 be withdrawn.

XII. Rejection of Claim 20 under 35 U.S.C. § 103

Claim 20 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Gandhi in view of Lee, Bender, Kim, Jang, Cheng and Nagarajan, in further view of U.S. Patent No. 5,949,757 to Katoh et al. (hereinafter, "Katoh"). Applicants respectfully traverse. The standard to establish a *prima facie* case of obviousness is provided above.

Claim 20 depend directly from claim 19. Accordingly, Applicants respectfully request that the rejection of claim 20 be withdrawn.

XIII. Rejection of Claims 11 and 29 under 35 U.S.C. § 103

Claims 11 and 29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gandhi in view Lee, Volftsun, Jang, Cheng and Nagarajan. Applicants respectfully traverse. The standard to establish a *prima facie* case of obviousness is provided above.

Claim 11 has been amended to recite:

> means for detecting an early time period, wherein the early time period occurs before the overload is detected . . . and wherein the plurality of control mechanisms are also implemented during the early time period.

Support for this amendment may be found in Applicants' specification, for example, pages 13-14, paragraph [0047] and page 16, paragraph [0054]. Gandhi, alone or in combination with Lee, Volftsun, Jang, Cheng and Nagarajan, does not teach or suggest this subject matter. The Office Action admits that "Gandhi does not particularly disclose . . . means for implementing a plurality of control mechanisms." (Office Action, page 46.) The addition of Lee, Volftsun, Jang, Cheng and Nagarajan does not overcome this deficiency.

Instead Lee states:

> An overload control method of a high speed data communication system can include judging whether an access network is overloaded, determining a class of the overload and restricting an originating call and a termination call according to the determined class during the overload. Since the access terminal, which can be the lowermost terminal of the system, controls the data call origination, resources at the side of the access network can be effectively managed. In addition, the overload control can be discriminately performed according to a degree of the overload so that the overload control method can effectively cope with the overload situation.

Lee, Abstract.

Determining a class of the overload does not teach or suggest "detecting an early time period, wherein the early time period occurs before the overload is detected" because if a class of overload is determined, the overload condition has already been detected. For example, Lee states "according to the determined class during the overload." (Id.) Similarly, performing the overload control "according to a degree of the overload" does not teach or suggest "wherein the plurality of control mechanisms are also implemented during the early time period." If overload control mechanisms are performed "according to a degree of the overload", the overload condition has likewise already been detected. In contrast, claim 11 recites that "the plurality of control mechanisms are also implemented during the early time period."

Lee also states:

> Another object of the present invention is to provide an overload control method of a data communication system that discriminately restricts an originating call and a termination call according to class of overload.
>
> Another object of the present invention is to provide an overload control method of a data communication system that restricts at least an originating call according to an overload status.

> Another object of the present invention is to provide an overload control method of a data communication system that restricts at least an originating call according to an overload status at an access terminal level.
>
> To achieve at least the above objects in whole or in part, there is provided a method that includes judging whether an access network is overloaded and determining a class of the overload for restricting an originating call and a termination call according to the determined class.

Lee, paragraphs [0033] to [0036].

Providing an overload control method "according to class of overload . . . an overload status . . . an overload status as an access terminal level" does not teach or suggest "detecting an early time period, wherein the early time period occurs before the overload is detected . . . and wherein the plurality of control mechanisms are also implemented during the early time period" because the overload has already occurred (i.e., overload has a class, status, degree, etc.) Simply judging whether an access network is overloaded does not teach or suggest "detecting an early time period, wherein the early time period occurs before the overload is detected . . . and wherein the plurality of control mechanisms are also implemented during the early time period."

Lee further states:

> Preferred embodiments according to the present invention can be implemented such that an overload control process periodically checks whether the access network is overloaded.

Lee, paragraph [0052].

Checking whether the access network is overloaded does not teach or suggest "detecting an early time period, wherein the early time period occurs before the overload is detected . . . and wherein the plurality of control mechanisms are also implemented during the early time period." Instead, Lee states that overload control mechanisms are only implemented when overload has been detected. For example, Lee states "when the access network is overloaded, a call is discriminately restricted according to a degree of overload." (Id. paragraph [0052].) Lee does not teach that "the plurality of control mechanisms are also implemented during the early time period."

The addition of Volftsun does not overcome the deficiencies of Gandhi and Lee. The Office Action merely points to Volftsun to support the assertion that Volftsun teaches "detecting a second type of overload as a result of one of the parameters crossing a second threshold." (Office Action, page 47.) However, the Office Action does not point to, and Applicants cannot

find any teaching or suggestion by Volftsun of "detecting an early time period, wherein the early time period occurs before the overload is detected . . . and wherein the plurality of control mechanisms are also implemented during the early time period."

Similarly, the addition of Jang, Cheng and Nagarajan does not overcome the deficiencies of Gandhi and Lee. The Office Action merely points to Jang, Cheng and Nagarajan to support the assertion that these references teach selecting the control mechanism based on "the type of application running in the base station, the persistence of the load on the base station and one or more quality of service (QoS) rules." (Office Action, page 48.) However, the Office Action does not point to, and Applicants cannot find any teaching or suggestion by Jang, Cheng and Nagarajan of "detecting an early time period . . . wherein the early time period occurs before the overload is detected . . . and wherein the plurality of control mechanisms are also implemented during the early time period."

In view of the foregoing, Applicants respectfully submit that claim 11 is patentably distinct from the cited references. Accordingly, Applicants respectfully request that the rejection of claim 11 be withdrawn.

Claim 29 has been amended to include subject matter similar to the subject matter amended to claim 11. As such, Applicants submit that claim 29 is patentably distinct from the cited references for at least the same reasons as those presented above in connection with claim 11. Accordingly, Applicants respectfully request that the rejection of claim 29 be withdrawn.

XIV. Rejection of Claims 32 and 34 under 35 U.S.C. § 103

Claims 32 and 34 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gandhi in view of Lee, Jang, Cheng, Nagarajan and U.S. Patent No. 5,697,054 to Andersson (hereinafter, "Andersson"). Applicants respectfully traverse. The standard to establish a *prima facie* case of obviousness is provided above.

Claim 32 has been amended to recite:

> detect an early time period, wherein the early time period occurs before the overload is detected . . . and wherein the plurality of control mechanisms are also implemented during the early time period.

Support for this amendment may be found in Applicants' specification, for example, pages 13-14, paragraph [0047] and page 16, paragraph [0054]. Gandhi, alone or in combination

with Lee, Andersson, Jang, Cheng and Nagarajan, does not teach or suggest this subject matter. The Office Action admits that "Gandhi does not particularly disclose . . . means for implementing a plurality of control mechanisms." (Office Action, page 51.) The addition of Lee, Andersson, Jang, Cheng and Nagarajan does not overcome this deficiency.

Instead Lee states:

> An overload control method of a high speed data communication system can include judging whether an access network is overloaded, determining a class of the overload and restricting an originating call and a termination call according to the determined class during the overload. Since the access terminal, which can be the lowermost terminal of the system, controls the data call origination, resources at the side of the access network can be effectively managed. In addition, the overload control can be discriminately performed according to a degree of the overload so that the overload control method can effectively cope with the overload situation.

Lee, Abstract.

Determining a class of the overload does not teach or suggest "detect an early time period, wherein the early time period occurs before the overload is detected" because if a class of overload is determined, the overload condition has already been detected. For example, Lee states "according to the determined class during the overload." (Id.) Similarly, performing the overload control "according to a degree of the overload" does not teach or suggest "wherein the plurality of control mechanisms are also implemented during the early time period." If overload control mechanisms are performed "according to a degree of the overload", the overload condition has likewise already been detected. In contrast, claim 32 recites "wherein the plurality of control mechanisms are also implemented during the early time period."

Lee also states:

> Another object of the present invention is to provide an overload control method of a data communication system that discriminately restricts an originating call and a termination call according to class of overload.
>
> Another object of the present invention is to provide an overload control method of a data communication system that restricts at least an originating call according to an overload status.
>
> Another object of the present invention is to provide an overload control method of a data communication system that restricts at least an originating call according to an overload status at an access terminal level.

> To achieve at least the above objects in whole or in part, there is provided a method that includes judging whether an access network is overloaded and determining a class of the overload for restricting an originating call and a termination call according to the determined class.

Lee, paragraphs [0033] to [0036].

Providing an overload control method "according to class of overload . . . an overload status . . . an overload status as an access terminal level" does not teach or suggest "detect an early time period, wherein the early time period occurs before the overload is detected . . . and wherein the plurality of control mechanisms are also implemented during the early time period" because the overload has already occurred (i.e., overload has a class, status, degree, etc.) Simply judging whether an access network is overloaded does not teach or suggest "detect an early time period, wherein the early time period occurs before the overload is detected . . . and wherein the plurality of control mechanisms are also implemented during the early time period."

Lee further states:

> Preferred embodiments according to the present invention can be implemented such that an overload control process periodically checks whether the access network is overloaded.

Lee, paragraph [0052].

Checking whether the access network is overloaded does not teach or suggest "detect an early time period, wherein the early time period occurs before the overload is detected . . . and wherein the plurality of control mechanisms are also implemented during the early time period." Instead, Lee states that overload control mechanisms are only implemented when overload has been detected. For example, Lee states "when the access network is overloaded, a call is discriminately restricted according to a degree of overload." (Id. paragraph [0052].) Lee does not teach "the plurality of control mechanisms are also implemented during the early time period."

The addition of Andersson does not overcome the deficiencies of Gandhi and Lee. The Office Action merely points to Andersson to support the assertion that Andersson teaches "a second processor configured to support communications with the communications devices, wherein one of the parameters is a function of loading on the second processor." (Office Action, page 50.) However, the Office Action does not point to, and Applicants cannot find any teaching or suggestion by Andersson of "detect an early time period, wherein the early time period occurs

before the overload is detected . . . and wherein the plurality of control mechanisms are also implemented during the early time period."

Similarly, the addition of Jang, Cheng and Nagarajan does not overcome the deficiencies of Gandhi and Lee. The Office Action merely points to Jang, Cheng and Nagarajan to support the assertion that these references teach selecting the control mechanism based on "the type of application running in the base station, the persistence of the load on the base station and one or more quality of service (QoS) rules." (Office Action, page 52.) However, the Office Action does not point to, and Applicants cannot find any teaching or suggestion by Jang, Cheng and Nagarajan of "detect an early time period, wherein the early time period occurs before the overload is detected . . . and wherein the plurality of control mechanisms are also implemented during the early time period."

In view of the foregoing, Applicants respectfully submit that claim 32 is patentably distinct from the cited references. Accordingly, Applicants respectfully request that the rejection of claim 32 be withdrawn.

Claim 34 has been amended with subject matter similar to the subject matter amended to claim 32. As such, Applicants submit that claim 34 is patentably distinct from the cited references for at least the same reasons as those provided above in connection with claim 32. Accordingly, Applicants respectfully request that the rejection of claim 34 be withdrawn.

XV. Rejection of Claim 37 under 35 U.S.C. § 103

Claim 37 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gandhi in view of Andersson, Lee, Laakso, Jang, Cheng and Nagarajan. Applicants respectfully traverse. The standard to establish a *prima facie* case of obviousness is provided above.

Claim 37 has been amended to recite:

> detect an early time period, wherein the early time period occurs before the overload is detected . . . wherein the plurality of control mechanisms are also implemented during the early time period.

Support for this amendment may be found in Applicants' specification, for example, pages 13-14, paragraph [0047] and page 16, paragraph [0054]. Gandhi, alone or in combination with Lee, Andersson, Laakso, Jang, Cheng and Nagarajan, does not teach or suggest this subject matter. The Office Action admits that "Gandhi does not particularly disclose . . . means for

implementing a plurality of control mechanisms." (Office Action, page 60.) The addition of Lee, Andersson, Laakso, Jang, Cheng and Nagarajan does not overcome this deficiency.

Instead Lee states:

> An overload control method of a high speed data communication system can include judging whether an access network is overloaded, determining a class of the overload and restricting an originating call and a termination call according to the determined class during the overload. Since the access terminal, which can be the lowermost terminal of the system, controls the data call origination, resources at the side of the access network can be effectively managed. In addition, the overload control can be discriminately performed according to a degree of the overload so that the overload control method can effectively cope with the overload situation.

Lee, Abstract.

Determining a class of the overload does not teach or suggest "detect an early time period, wherein the early time period occurs before the overload is detected" because if a class of overload is determined, the overload condition has already been detected. For example, Lee states "according to the determined class during the overload." (Id.) Similarly, performing the overload control "according to a degree of the overload" does not teach or suggest "wherein the plurality of control mechanisms are also implemented during the early time period." If overload control mechanisms are performed "according to a degree of the overload", the overload condition has likewise already been detected. In contrast, claim 37 recites "the plurality of control mechanisms are also implemented during the early time period."

Lee also states:

> Another object of the present invention is to provide an overload control method of a data communication system that discriminately restricts an originating call and a termination call according to class of overload.
>
> Another object of the present invention is to provide an overload control method of a data communication system that restricts at least an originating call according to an overload status.
>
> Another object of the present invention is to provide an overload control method of a data communication system that restricts at least an originating call according to an overload status at an access terminal level.
>
> To achieve at least the above objects in whole or in part, there is provided a method that includes judging whether an access network is

> overloaded and determining a class of the overload for restricting an originating call and a termination call according to the determined class.

Lee, paragraphs [0033] to [0036].

Providing an overload control method "according to class of overload . . . an overload status . . . an overload status as an access terminal level" does not teach or suggest "detect an early time period, wherein the early time period occurs before the overload is detected . . . and wherein the plurality of control mechanisms are also implemented during the early time period" because the overload has already occurred (i.e., overload has a class, status, degree, etc.) Simply judging whether an access network is overloaded does not teach or suggest "detect an early time period, wherein the early time period occurs before the overload is detected . . . and wherein the plurality of control mechanisms are also implemented during the early time period."

Lee further states:

> Preferred embodiments according to the present invention can be implemented such that an overload control process periodically checks whether the access network is overloaded.

Lee, paragraph [0052].

Checking whether the access network is overloaded does not teach or suggest "detect an early time period, wherein the early time period occurs before the overload is detected . . . and wherein the plurality of control mechanisms are also implemented during the early time period." Instead, Lee states that overload control mechanisms are only implemented when overload has been detected. For example, Lee states "when the access network is overloaded, a call is discriminately restricted according to a degree of overload." (Id. paragraph [0052].) Lee does not teach "the plurality of control mechanisms are also implemented during the early time period."

The addition of Andersson does not overcome the deficiencies of Gandhi and Lee. The Office Action merely points to Andersson to support the assertion that Andersson teaches "a second processor configured to support communications with the communications devices, and a third one of the parameters is a function of loading on the second processor." (Office Action, page 59.) However, the Office Action does not point to, and Applicants cannot find any teaching or suggestion by Andersson of "detect an early time period, wherein the early time period occurs

before the overload is detected . . . and wherein the plurality of control mechanisms are also implemented during the early time period."

Further, the addition of Laakso does not overcome the deficiencies of Gandhi and Lee. The Office Action merely points to Laakso to support the assertion that Laakso teaches "the second one of the parameters is a function of transmission power requirements for the transmitter." (Office Action, page 59.) However, the Office Action does not point to, and Applicants cannot find any teaching or suggestion by Laakso of "detect an early time period, wherein the early time period occurs before the overload is detected . . . and wherein the plurality of control mechanisms are also implemented during the early time period."

Similarly, the addition of Jang, Cheng and Nagarajan does not overcome the deficiencies of Gandhi and Lee. The Office Action merely points to Jang, Cheng and Nagarajan to support the assertion that these references teach selecting the control mechanism based on "the type of application running in the base station, the persistence of the load on the base station and one or more quality of service (QoS) rules." (Office Action, page 61.) However, the Office Action does not point to, and Applicants cannot find any teaching or suggestion by Jang, Cheng and Nagarajan of "detect an early time period, wherein the early time period occurs before the overload is detected . . . and wherein the plurality of control mechanisms are also implemented during the early time period."

In view of the foregoing, Applicants respectfully submit that claim 37 is patentably distinct from the cited references. Accordingly, Applicants respectfully request that the rejection of claim 37 be withdrawn.

XVI. Rejection of Claim 38 under 35 U.S.C. § 103

Claim 38 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Gandhi in view of Andersson, Laakso, Lee, Jang, Cheng and Nagarajan, and further in view of Padovani. Applicants respectfully traverse. The standard to establish a *prima facie* case of obviousness is provided above.

Claim 38 depends directly from claim 37. Accordingly, Applicants respectfully request that the rejection of claim 38 be withdrawn.

REQUEST FOR ALLOWANCE

In view of the foregoing, Applicants submit that all pending claims in the application are patentable. Accordingly, reconsideration and allowance of this application are earnestly solicited. Should any issues remain unresolved, the Examiner is encouraged to telephone the undersigned at the number provided below.

Respectfully submitted,

Dated: Sept. 26, 2007

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